

CETIS Test Evaluation Report

Report Date: 07 Aug-20 09:52 (1 of 3)
Test Code/ID: CDUD0635 / 17-8657-9793

Facility: Yakima WWTP
Sample Site:
Sample Code: CDUD0635
Sample Date: 01 Jun-20 08:00
Sample Age: 29h (2.5 °C)
Project:

Permittee: Yakima
Address:

Contact:
Phone:
Email:

Test Name: Fathead Minnow 7-d Larval Survival and Growth Test
Organism: Pimephales promelas (fathead minnow)
Protocol: EPA/821/R-02-013 (2002)
Start Date: 02 Jun-20 12:45
End Date: 09 Jun-20 12:30
Duration: 7d **Organism Age:** <24h

Laboratory: Rainier Environmental Laboratory
Address: 5013 Pacific Highway E.
Suite 20
Fife, WA 98424
Contact: Eric Tollefson, Laboratory Manager
Phone: (253) 922-8898
Email: eric@rainierenvironmental.com

Chronic Toxicity Evaluation

Analysis ID	Endpoint	Criteria	Conc-%	IWC	Decision	Method
02-3360-5517	7-day Survival	NOEL/LOEL	100/>100	9.88	Passes IWC	Steel Many-One Rank Sum Test
15-0180-3228	Biomass	NOEL/LOEL	100/>100	9.88	Passes IWC	Dunnett Multiple Comparison Test
14-7247-3211	Weight	NOEL/LOEL	100/>100	9.88	Passes IWC	Dunnett Multiple Comparison Test

Test Review Comments

CDUD0635-YakimaWWTP.pdf - Chronic FHM

This toxicity test is acceptable according to test review criteria. There were no significant deficiencies in sample handling, test performance, test organism response, or statistical analysis.

The sample tested was nontoxic to this test organism.

Test Reviewer

Reviewer: Chris Dudenhoeffer, WET Coordinator
Phone: 360-407-6445
Email: cdud461@ecy.wa.gov

Signature

Date

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7-day Survival Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9750	0.8954	1.0000	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
9.88		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
12.5		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
53.8		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%

Biomass Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.487	0.4078	0.5662	0.418	0.531	0.02488	0.04977	10.22%	0.00%
9.88		4	0.4638	0.3295	0.598	0.413	0.59	0.0422	0.08439	18.20%	4.77%
12.5		4	0.4502	0.3461	0.5544	0.398	0.546	0.03273	0.06546	14.54%	7.55%
25		4	0.494	0.3867	0.6013	0.416	0.579	0.03372	0.06744	13.65%	-1.44%
53.8		4	0.5322	0.4587	0.6058	0.47	0.575	0.0231	0.04621	8.68%	-9.29%
100		4	0.5158	0.3706	0.6609	0.39	0.605	0.0456	0.09121	17.68%	-5.90%

Weight Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.5013	0.3967	0.6059	0.418	0.5711	0.03286	0.06573	13.11%	0.00%
9.88		4	0.4638	0.3295	0.598	0.413	0.59	0.0422	0.08439	18.20%	7.49%
12.5		4	0.4502	0.3461	0.5544	0.398	0.546	0.03273	0.06546	14.54%	10.18%
25		4	0.494	0.3867	0.6013	0.416	0.579	0.03372	0.06744	13.65%	1.45%
53.8		4	0.5322	0.4587	0.6058	0.47	0.575	0.0231	0.04621	8.68%	-6.18%
100		4	0.5158	0.3706	0.6609	0.39	0.605	0.0456	0.09121	17.68%	-2.89%

7-day Survival Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	0.9000
9.88		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
53.8		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

Biomass Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.418	0.531	0.485	0.514
9.88		0.413	0.425	0.427	0.59
12.5		0.431	0.398	0.426	0.546
25		0.478	0.416	0.503	0.579
53.8		0.526	0.47	0.575	0.558
100		0.605	0.39	0.55	0.518

Weight Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.418	0.531	0.485	0.5711
9.88		0.413	0.425	0.427	0.59
12.5		0.431	0.398	0.426	0.546
25		0.478	0.416	0.503	0.579
53.8		0.526	0.47	0.575	0.558
100		0.605	0.39	0.55	0.518

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7-day Survival Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	9/10
9.88		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
53.8		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10